

## Profitable use of energy resources

Much of the earth's resources are consumed in our essential industries, so it is vitally necessary that they are used efficiently. All resources are precious, not the least being energy, but not only is electricity production flexible enough to be able to use all primary fuels but many electrical processes provide real savings in raw materials.

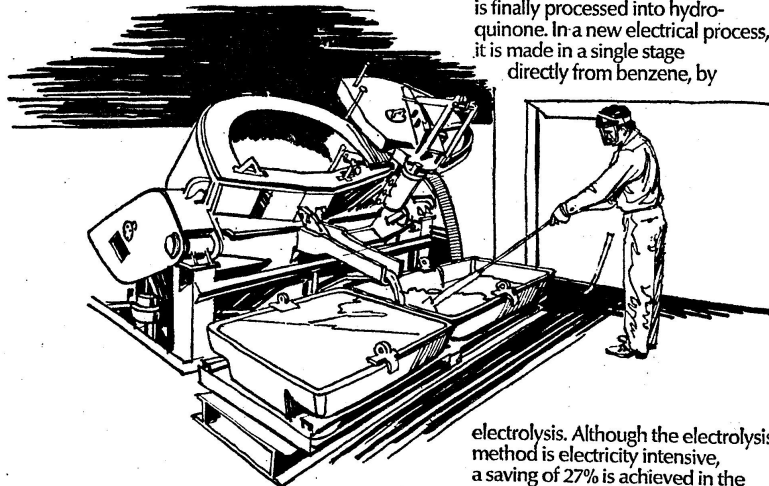
### Electricity and metal savings

The use of electricity for metal melting, for instance, can bring economies in terms of reduced material loss. Traditional aluminium melting furnaces produce aluminium oxide 'dross' which, on average,

to extract aluminium from the ore so that any reduction of melting losses results in energy savings too.

### Reducing overall energy requirements

Usually the cost of electricity constitutes only a small fraction of the final cost of an article—normally less than 5%. But in electro-chemical processes the proportion is necessarily much higher, although hidden benefits often result. For instance, the traditional way of making the photographic chemical hydroquinone is by a three-stage process, starting with benzene to produce nitrobenzene, then aniline, which is finally processed into hydroquinone. In a new electrical process, it is made in a single stage directly from benzene, by



amounts to a total metal loss of about 2.5% whereas electric furnaces produce not more than 1%. But not only metal is saved in this way. It takes a great deal of energy

electrolysis. Although the electrolysis method is electricity intensive, a saving of 27% is achieved in the overall energy requirement.

These examples illustrate the need to consider all resources in industrial processing and not just energy in isolation.

**Electricity does the nation a power of good**



The Electricity Council, England and Wales.

**The Electricity Council.**

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